

were made upon the blackboard and the salient features indicated, and in the course of a demonstration six or eight specimens might thus be started on the tour of inspection.

Of his pathological work, the earliest was upon vascular disorders. He was the first to elucidate the true nature of phlebitis, thrombosis and embolism, to recognise the essential features of leukæmia and to distinguish this condition from pyæmia, so laying the foundation for the brilliant work of Ehrlich and others upon hæmatology. In 1858, his "Cellular Pathology" appeared, in which the theory that every cell arises from a pre-existing cell was enunciated and the cellular derivation of the connective tissues, bone and cartilage recognised. Up to this time, the humoral theory had dominated medicine, but these considerations revolutionised pathology by introducing the new conception that all pathological cell-formations must arise from pre-existing normal cells. He says in his lectures, "The question is whether the general types which we have established for the physiological tissues will also be found to hold good for the pathological ones. To this I unreservedly reply, yes; and however much I herein differ from many of my living contemporaries, however positively the peculiar (specific) nature of many pathological tissues has been insisted upon during the last few years, I will nevertheless endeavour to furnish you with proofs that every pathological structure has a physiological prototype and that no form of morbid growth arises which cannot in its elements be traced back to some model which had previously maintained an independent existence in the economy."

Harvey had enunciated the celebrated proposition *Omne vivum ex ovo*, subsequently found to be too narrow to apply to all living forms; to Virchow pathology and physiology are indebted for the not less striking dictum, *Omnis cellula e cellula*. By this his name will live through the ages. Another great work of his was that on tumours, unfortunately never completed. He showed that cartilaginous tumours of bone might start from islands of cartilage which had remained untransformed during the general ossifying process, and thus gave some support to Cohnheim's theory of the origin of tumours from embryonic remains. He further made contributions on tuberculosis and leprosy, trichiniasis, hydatid tumours of the liver, lardaceous disease, cholera and diphtheria, and animal pigments; in fact, it is no exaggeration to say that there is hardly any subject in pathology that has not been illumined by some important contribution of his. He was a pathological anatomist and histologist rather than an experimental pathologist, and pathological bacteriology was of too recent development for him to contribute to it extensively. It is true that he made mistakes—he was but mortal; for example, his theory of the dependence of chlorosis upon anatomical defects in the circulatory organs has been found untenable—but he was the first to recognise them, and as often as not himself destroyed the fabric he had previously erected.

Virchow's fame was world-wide, and honours of all kinds were showered upon him. In 1874, he became a member of the Royal Academy of Science of Berlin; at the centenary of the Institute of France he was made a Commander of the Legion of Honour, and the following year Foreign Associate of the French Academy of Sciences. A foreign member of our Royal Society, he was Copley medallist in 1892 (an honour he highly appreciated) and Croonian lecturer in 1893. The subject of his discourse, delivered in English, on this occasion was "The Position of Pathology among the Biological Sciences" (NATURE, vol. xlvii. p. 487). In 1898, his last visit to us, he delivered the Huxley lecture at Charing Cross Medical School, and he was afterwards entertained at a banquet, at which Lord Lister presided. The title of the Huxley lecture was "Recent Advances in Science and their Bearing on Medicine and Surgery," and to the

last he retained his marvellous vitality of mind and kept abreast of the most recent advances in pathology. Last year, on the occasion of his eightieth birthday, he was the recipient of congratulatory addresses from all parts of the world, Lord Lister representing the Royal Society and other learned bodies of Great Britain and Ireland, and his reply, which occupied nearly two hours in delivery and was brimful of dates and facts, was given without a note.

His countrymen rightly accorded him a public funeral, and representatives of the State, the city, the university and of the learned societies accompanied his remains to their last resting place.

Space forbids anything but this brief sketch of Virchow's life, but as a writer in the *Lancet* well says, "His active work ceased only with his death, the world's appreciation of his worth remains." R. T. H.

THE ABEL FESTIVAL IN CHRISTIANIA.

THE centenary of the birth of the famous Norwegian mathematician Henrik Niels Abel was celebrated in Christiania by a festival, or rather a series of festivals, which lasted from September 4 to 7, to which delegates from all the more important scientific societies and universities of the world were invited. The festival aroused the interest of the people of Christiania in a very unusual degree and, indeed, appeared to be regarded in the light of an important national event; the presence of the King of Sweden and Norway, who made a special journey from Stockholm for the purpose, contributed in a high degree to emphasise the importance attached to the festivities by the whole population of the Norwegian capital. The festival was inaugurated by an informal reception of the delegates at a supper-party given on the evening of September 4 at St. Haushangen, a place of popular resort on the outskirts of Christiania. The company was received by the famous Arctic explorer, Dr. Nansen, president of the reception committee, by the Foreign Minister Lagerheim, the Ministers of State Blehr and Ovam, the president of the Storting, and Prof. Mohn, president of the Christiania Academy of Science. In a bright and genial speech delivered in English, Dr. Nansen welcomed the foreign delegates and expressed the feeling of pride on the part of his own small nation in having through Abel made an important contribution to the essentially international work of the development of science and of civilisation. The formal part of the festival commenced at noon on September 5 in the Hall of the Municipality; the King and his son Prince Eugen arrived shortly after noon, and were received by a guard of honour, consisting of students of the University of both sexes. The ceremony consisted of the performance of a cantata written by the celebrated author Björnson, and of speeches which were made between the first and second parts of the cantata. Speeches were delivered by the Minister of State Blehr in French, by Prof. W. C. Brogger in German, and on behalf of the delegates by Prof. H. Weber, of Strassburg, and Prof. Volterra, of Rome. A detailed appreciation of Abel's work was given by Prof. L. Sylow. In the evening, the delegates had the honour of being invited by the King to a reception and supper at the Castle, when a large and distinguished company was present; many of the delegates were presented to the King, who conversed freely with them in their own languages. The second part of the festival was held on September 6, at noon, in the Hall of the University, the King and Prince Eugen being again present. The proceedings commenced with an address in French by Prof. Mohn. Speeches were then delivered by Prof. Forsyth on behalf of the English-speaking delegates; by Prof. Gravé on behalf of the Slav nations; by Prof. Picard, Prof. Schwarz, Prof. Zeuthen, Prof. Henzel

and Prof. Mittag-Leffler. The eloquent speech of Prof. Forsyth met with the special approval of the audience and of the Christiania Press. The addresses from the various universities and learned societies were then delivered by the delegates; these were so numerous that with a few exceptions the delegates handed them in with a simple statement of the name of the society or university from which they came.

The last stage of the proceedings consisted of the conferring of honorary degrees upon twenty-nine distinguished men of science, of whom ten were present as delegates. It was explained that the University of Christiania had hitherto not possessed the power of granting honorary degrees, but that by a special Act of the Storting the power had been granted to the University with a view to the present occasion. Among the twenty-nine mathematicians who were created *Doctores Mathematicae*, there were six British subjects—Lord Kelvin, Lord Rayleigh, Dr. Salmon (provost of Trinity College, Dublin), Sir George Gabriel Stokes, Prof. G. H. Darwin and Prof. A. R. Forsyth. In the evening, the delegates and a large number of other guests were entertained at dinner by the Municipality of Christiania; after the dinner there was a torch-light procession of many hundreds of students, which produced a most imposing effect. The students were addressed from an open window by Dr. Nansen in an enthusiastic speech. The festival concluded with a special representation of Ibsen's *Peer Gynt* at the National Theatre on the evening of September 7, the King and a distinguished company being present. The University of Oxford was represented by Prof. A. E. H. Love, F.R.S., the University of Cambridge by Prof. A. R. Forsyth, F.R.S., the University of Dublin by Prof. Joly, the University of Durham by Prof. Sampson, the University of London by Prof. A. G. Greenhill, F.R.S., the University of Glasgow by Prof. Jack, the London Mathematical Society and the Cambridge Philosophical Society by Dr. Hobson, F.R.S.

MR. F. W. RUDLER AND THE MUSEUM OF PRACTICAL GEOLOGY.

MR. F. W. RUDLER retired under the age regulations at the end of last month from the post of curator and librarian of the Museum of Practical Geology. He entered the public service in 1860 as assistant to Trenham Reeks, who was then curator of the Museum and registrar of the School of Mines. For fifteen years Mr. Rudler was actively engaged in the Museum, acquiring an intimate knowledge of mineralogy and applied geology, and an expert knowledge of British pottery. He practically re-wrote the third and fourth editions of the "Descriptive Guide to the Museum," which was originally drawn up by Robert Hunt; and he almost wholly prepared the second and third editions of the "Catalogue of Specimens of British Pottery and Porcelain."

In 1876, Mr. Rudler was chosen professor of natural science in the newly-established University College of Wales at Aberystwyth. Here he was successfully occupied for three years, until on the death of Mr. Reeks he was besought by the late Sir Andrew Ramsay to apply for the post rendered vacant in the Museum of Practical Geology. Mr. Rudler's appointment was cordially assented to, and from 1879 onwards he has held office with increasing advantage to the Institution and to the many individuals who have constantly sought his advice. It is not too much to say that one might search the world over and fail to find anyone with a fuller knowledge of the subjects that have been connected with the Library and Museum of Practical Geology, or one who was more ready at all times to give to others the benefit of varied and accurate information.

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NOTES.

A COMMITTEE has been formed, under the chairmanship of Prof. Waldeyer, for the erection in Berlin of a public memorial of the late Prof. Virchow.

DR. DAVID FERRIER, F.R.S., will deliver the Harveian oration before the Royal College of Physicians, London, on October 18.

WE are sorry to have to record the death, at the age of sixty-eight, of Mr. J. W. Powell, director, since 1879, of the United States Bureau of Ethnology, and from 1880 to 1894 director of the United States Geological Survey. Mr. Powell's death occurred on September 23.

THE death, at the age of eighty-six, is reported of M. Vincent Leche Chesnevieux, the French traveller and geologist; also of Signor Adolfo Targioni-Tozzetti, emeritus professor of comparative anatomy and the zoology of the invertebrates in the Medical School at Florence. Prof. Targioni-Tozzetti was in his eightieth year.

THE *Pioneer* (Allahabad) learns from its correspondent at Kashgar that a severe earthquake occurred at that place at 8 a.m. on August 22, resulting in the loss of 1000 lives and great damage to property. A pronounced rise in the temperature immediately followed the shock. This rise continued for a week, during which period there were repeated slight shocks. A Reuter telegram from Simla, dated September 26, gives the number of people killed as 667, and states that more than 1000 persons were injured.

REUTER'S agent at Mobile, telegraphing on September 30, states that information has been received by steamer that an earthquake of a serious character occurred in Guatemala and British Honduras on September 23. The shocks occurred simultaneously along the coast and lasted three minutes. It is believed that Guatemala City was the centre of the disturbances. The telegraph wires are down between Guatemala City and the coast.

A REUTER telegram from New York, dated September 24, states that the *New York Herald* has published the following telegram from Lima:—"Mount Chullapata, which is situated 18 miles from Celendin, has been throwing up dust and smoke for a fortnight. Loud noises have been audible at a distance of 30 miles from the mountain. There is no record that Mount Chullapata was ever believed to be a volcano."

A SEVERE cyclone visited the eastern Sicilian coast on Friday last from Taormina to Catania, and resulted in a heavy loss of life and very great damage to property. At Modica, two mountain torrents burst their banks and submerged the lower portion of the town as high as the second floor of the houses. The disaster was at first attributed to a waterspout, but subsequent accounts declared that it was due to torrential rains following on the prolonged drought. Throughout the day, Mount Etna sent up a thick column of steam from the vicinity of the scene of the eruption of 1892.

A SEVERE typhoon occurred at Yokohama on September 29, and a great wave broke over the adjacent district of Odawara, causing, it is feared, the loss of 200 lives; much shipping was also damaged.

AN Institute of Colonial Medicine has, says the *British Medical Journal*, recently been established in Paris. The scheme of instruction comprises courses on bacteriological and hæmatological technique, parasitology, tropical surgery, tropical ophthalmology, tropical pathology and hygiene, and tropical skin diseases. The Institute is open to foreign as well as to French medical practitioners.